CHAPTER 2

REVIEW OF LITERATURE

To provide a broad context for a better understanding of the effect of paraplegia on Thai men's life and how they perceive and manage their everyday life, the review of literature was done on these following topics: 1) an overview of people with a disability in Thailand; 2) young adult Thai males with paraplegia; and 3) issues of managing and coping with paraplegia. An overview of people with a disability in Thailand is aimed to describe the structure of Thai society and Thai disabled-person status in the past and present. The literature on young adult Thai males with paraplegia is intended to show functional change after paraplegia. Lastly, the literature on issues of managing and coping with paraplegia is reviewed in order to gain understanding of the concept of coping, factors affecting coping in everyday life, and some important theoretical perspective with research exploring coping among persons with paraplegia.

An Overview of People with a Disability in Thailand

Over the past ten years at least, the years that Thailand had the first Rehabilitation of Disabled Person Act (B.E.2534), there has been some change concerning societal attitudes toward people with disability in Thailand. To what extent real, concrete changes in the life conditions and opportunities of Thai disabled people have been achieved is perhaps less clear. The following description of the structure of Thai society and Thai disabled person status in the past and present will help to understand the informant experience in a Thai cultural context.

The Structure of Thai Society

Norms and social structure strongly influence how Thai men experience and cope with paraplegia. Additionally, to influence individual attitude, beliefs, and behaviors, norms and social structure direct how a society responds toward disabled persons. That is, people's behavior in society are shaped by the values which are held by their society and the structure of that society. In this study, the structure of Thai society including family structure, religion, and Thai male characteristics are presented together.

Family structure. Family in Thailand is the center of all social organization (Wongsith, 1991). Family and kinship provide the basis of the individual's identity as well as facilitating continuity of culture and religion. The northern Thai family in general can be classified into two main types: the stem family and the nuclear family. These two types are simple reflections of the different stages in the family developmental cycle. Briefly, the Northern Thai have a matrilocal residence norm whereby a daughter and husband reside with the woman's parents for a period of time after their marriage (Potter, 1977). At this point, the married couples become members of a stem family. Later, after the marriage of the younger sister, the elder daughter and husband move out from the family's original house and establish their own nuclear household usually nearby or within the same compound as the wife's parents. Even though matrilocal residence is the norm, the eldest male is the head of the household and thus the major authority figure in the family itself. Authority, as a result, is transferred by affinity from father-in-law or son-in-law (Chamratrithirong, Yoddumnern-Attig, & Singhadej, 1988).

In a traditional northern Thai family, the characteristic of family life shows that formal authority belongs to men rather than women, juniors defer to seniors, seniors assume responsibility for the welfare of juniors, and family relations are lineal (Potter, 1977; Limanonda, 1991). Podhisita (1991) who studied the rural Thai family, stated that in the family, power is typically with the male head of family but when the male head is absent or disabled, the female head usually exercises that power. Within the general principle, the husband and wife share the power in many aspects of the family, especially when important matters such as buying or selling valuable things and education or marriage of their children are concerned. In the division of labor the within the family, the husband is incharge of business outside the home and represents the family while the wife controls household activities.

With the broad social changes wrought by the rapid socio-economic development in the past decade and the rise of industrialization and technology, many family members are compelled to leave the family to seek paid employment (Wongsith, 1991). This shift has resulted in an increased number of nuclear families and a decline in the number of traditional, joint families. The division of power is still by no means rigid, the husband and wife can replace each other in their respective activities and in many circumstances they consult each other before a decision (Limanonda, 1991). The relationship of husband and wife revolves around rights and duties, respect, politeness, and gratefulness (Klausner, 1998). However, the father is regarded as the head of the house to whom the wife and children still show due respect. He serves as the cornerstone of the family and contributes to the effective functioning of the family unit both through taking over household duties and through the role of family consultant on important matters (Wongsith, 1991).

Men are taught to be the leader of the family. A Thai proverb says that the man is the front legs of the elephant and woman is the rear legs. Men are expected to lead and seek support for the family. Therefore, men who sustain paraplegia may be extremely discouraged and depressed or feel self-worthlessness when they lose the ability to be the breadwinner in their family. With a disabled condition, they have to depend on family members for almost every aspect of their life. In current Thai culture, dependence on family members in a disabled condition is probably considered a problem because interdependence is valued more than independence or dependence (Limanonda, 1991).

Religion. The predominant religion among northern Thais is Theravada Buddism. This type of Buddhism prescribes that men are ritually superior to women (Chamratrithirong et al., 1988). Buddhism is seen not only as a body of doctrines, but also a way of life, particularly as lived out answers to universal questions of values (Ratanakul, 1996). Thus, it undoubtedly has directly or indirectly exerted a strong influence on the Thais' everyday life (Komin, 1991). Most Thai's understanding of Buddhism largely revolves around the concept of karma, rebirth, merit and sin (Klausner, 1998). Thais usually use these concepts in situations associated with negative events, bad fortunes, tragedies, injustice, etc., that happened to oneself or others. They believe that every thing or event that occurs in their life is beyond their control. They can not do anything about them but accept them as the result of their karma (Komin, 1991). The advice of Buddhism to a person with an incurable disease is to be patient and to perform good deeds to mitigate the effects of the past bad karma. At least the individual effort to maintain or recover is itself good karma (Ratanakul, 1996). To believe in karma is to take on personal responsibility for health. It may be comfortable to think that their illness is no fault of their present life but the legacy of a far distant past. These beliefs help to reduce tremendous psychological pressure on one's inability to measure up to one's achievement of goals.

Furthermore, some Thais seek out the sanctuary of Buddhism after major stress events in life in order to re-establish some psychological equilibrium before continuing with one's life (Komin,1991). Besides this, the law of karma influences Thai individualism-whereby each is working to improve his own karmic status as it is phased in daily parlance " *Tham dii dai dii , tham chua dai chua"* (do good, receive good, do evil, receive evil). Buddhism has supplied cognitive and evaluative elements that have been incorporated into Thai culture and built into Thai social structure (Kesten, 1989). Buddhism teaches tolerance and kindness toward their fellow men regardless of race, creed or nationality (Klausner, 1993). The influence of these beliefs lead to some behaviors, such as people bear unpleasant things without complaint, share surplus goods with those less fortunate, give alms, and care for the sick and infirm.

Thai men characteristics. In Thailand, Komin (1991) studied value and behavioral patterns among young adult Thai males and found that their cognitive world of personal life is dominated by an aspiration for having an intimate mature love relationship. Their perception of society and the career world is characteristically idealistic, full of energy to advocate and work for the ideals, broadminded, imaginative, creative, ambitious-hardworking, but the degree of religiosity would usually drop during early adulthood. For young adult Thai males, value is characterized by one significant high political value of equality. During this period, persons seek for equality, they have dissatisfaction and bitterness are hot-blooded, and have a low value of self-control. Thus, the value profile of Thai men consists of such traits as more other-oriented, concern over society at large, value power and politics, and values of equality and freedom ahead of ego, value self-esteem, concern for success in life, as well as social recognition and status-wealth.

Podhisita (1991) studied the rural Thai family in the section of life course events which most individuals pass through in the process of becoming an adult. He found that a characteristic of adulthood mentioned by nearly all informants (677 persons) is responsibility. Other important characteristics of adulthood include reasonableness, patience, thoughtfulness, proper behavior toward people in accordance with the appropriate situation and place, and high moral principles according to religious values.

Furthermore, young adult Thai males character traits may be under the influence of Buddhism such as *Jai yen* (easy-going), *Choej* (non-active response), *Bunkhun* (indebted goodness) and *Mai pen raj* (nothing really matters). Such characteristics have often been explained by the Buddhist teaching of the "middle path", “detachment”, “equanimity” “self-reliance”, and “extinction” of desire and emotion (Komin, 1991). These values have an impact on young adult Thai males in daily living.

Generally, Komin (1991) found that the fundamental elements of Thais have a very big “ego”, a deep sense of independence, pride, and dignity. They can not tolerate any violation of the ego self. This ego orientation is the root value underlying various key values of the Thais, such as “*face-saving*”, “*avoidance of confrontation*”, and “*Kreng jai*” (to feel awe and fear). Face-saving is avoiding confrontation and endeavoring not to embarrass themselves or other people. The ideal face-saving doesn’t bring up negative topics in every conversation, and when they notice stress in another’s life they usually won’t say anything unless that person complains or asks for help (Cumming, 1997). Thais often use “ avoidance mechanism” or “ avoidance of confrontation” to fend off unnecessary clashes (Ratanakul, 1996). Thus, Thais tend to be less judgmental on any difficult problems in daily living. Thais place a high value on proper behavior. Ideal behavior of Thais include such elements as gentleness, politeness, generosity, gratefulness and propriety (Klausner, 1998). Peacefulness, non-violence, and non-aggressiveness are admirable traits (Kesten, 1989). Good behavior is expressed in the obedience and gratitude to parents. (Klausner, 1998).

Historical Status of Thai Disabled Persons

Over 30 to 40 years ago , Thailand was an agricultural nation, having 80 percent of the Thai working population in agriculture (Fulton, 1979). It was a self-contained one in its economy and needs (Nakornthap, 1992). For the most part, the Thai family is invariably described as an extended type, which is characterizes as a strong family bond (Kesten, 1989). The people's habit and customs are based mainly on agriculture and religion (Pongsapich, Banpasirichote, Lapthananon, & Veeravongse, 1993). The family includes grandparents, parents, and grandchildren who stay together for agricultural labor. They also help to work among the family members with generosity and benevolence. In addition, there is interdependent support among neighborhood ("Thai society with disabled law", 1987). When one family member had a disability, it was not a heavy burden to the family because their parents and cousins would help and care together as a family. A disabled person was not separate from the household and shared in the production and consumption with the family (Chawnatai, 1988). However, some disabled person had to separate from the household to live at the temple when their family was unable to look after them. Thus, in the past time, the temple was a disabled person's place of support. They could help a bit with the tasks of the temple, and also participate in all communal activities to the best of their abilities (Trantranon, 1979).

Disabled persons had only to live day by day and had no future. They viewed the temple and monk as their supporter ("Thai society with disabled law", 1987). Sometimes, people provided almsgiving for subsistence. These situations made living difficult and they had abnormal mind conditions. They did not receive help from special government sections, besides the almshouse of generous people. In this period, Thai social attitude toward disabled persons had prejudice and segregation, since they had outstanding physical limitations as a form which was different from what is considered normal or usual in society. They were also viewed as useless, having no capacity and being a social problem ("Thai society with disabled law", 1987). Thai social attitude exhibited disability caused by karma or their action. Disabled persons were separated from normal persons as a distinct group (Chawnatai, 1988).

However, in 1948, the Thai government considered to provide help to disabled soldiers from the Second World War. They established an organization to support disabled soldiers from the war , for returning the virtue of those soldiers. Later, the Post War Soldiers Act of B.E. 2510 affected the soldiers who were post-war soldiers. This Act allows disabled soldiers compensation, pension, monthly expense, loan for occupation, supportive prosthesis, cost of care, occupational therapy, children education, legal counseling and occupational guidance (Trantranon, 1979). However, for general disabled persons, there was no law to protect their rights besides the almshouse which was provided by the Thai government in 1941 (Chawnatai, 1988).

The Current Status of Thai Disabled Persons

At present, the disability situation may be beginning to change as the impact of contact with industrial capitalism has enforced changes in Thai traditional culture (Klausner, 1998). Thai society has become a semi-industrial situation. Thai families have a small size by staying only as parents and their children (Pongsapich et al., 1993). Because of the adverse effects of economic disadvantages, people are able to think about self benefit, ignore others, and don't know their neighborhood. Supposing there was disabled person in family, the caring and looking after the disabled person was a heavy burden on other family members. There was a loss of labor of at least two persons in the family. That is, the disabled persons and the caregiver ("Thai society with disabled law", 1987).

According to the regional expert seminar to review achievements at the mid-point of the united nations decade of disabled persons (United Nation, 1987), the situation of the 65 to 80 % of Thai disabled persons living in rural areas was that their family members were strong supporters of disabled relatives. If their parents are not too old yet, an active person can support a disabled person in the family and it was found that rarely a wife left her husband after he became disabled. It can also be seen that many children help to look after their parents when they become disabled, especially those of low socio-economic background. (Ohry et. al., 1998). However, in the case of persons with paraplegia who need assistance in overcoming their limitation it's not available. If in the end, there is really no family support, they can transfer to a proper place which accepts disabled persons. There are homes for the disabled, some belonging to the government and some to NGOs (Ohry et al., 1998).

In addition, attitude and action toward disabled people reflects a similarly ambivalent response. Most of attitudes exhibit a disabled person as a pitiful person, no capacity, unable to self-help and a burden to society. Another attitude which came from educated persons or modernized person, viewed disabled persons as a human being like others, having dignity and honor. They would like to have a happy family, working and able to socialize ("Thai society with disabled law", 1987). Buddhism also shows the response to disability as apparently equivocal. Buddhism believes some of those impairments as general support while also interpreting impairment as a punishment for sin. For social justice, disabled people are still denied some basic right which should be received.

Disability affects every aspect of Thai society: political, social, personal, economic, moral and legal. Because of the growing awareness of the impact of disability on society, the authority proposed the first Disability Act of B.E.2519, and the next Disability Rehabilitation Act of B.E.2521. However, laws did not keep up with the needs and demand of disabled people. Since the 1981's, the Year of International Disability, the government committee approved a long planning period of disabled support and rehabilitation of the nation during 1982 to 1991. This plan intended to have the Act for protecting the rights and welfare of disabled persons. Therefore, the Rehabilitation of Disabled Person Act of B.E.2534 was pioneering legislation that laid the groundwork for many laws to come. It proposed a definition of disability that continues to be used and appears in the Thai disabled right vows of B.E.2541. The Rehabilitation of Disabled Person Act prohibits employment discrimination on the basis of either physical or mental disability. It also prohibits the same discrimination in the provision of public services. Included in this law was a mandate for architectural accessibility. In the Rehabilitation of Disabled Person Act, disabled persons have to register to receive four benefits in aspects of medicine, education, occupation, and social services (Vimolkanjana, 1998). This Act involved five ministries including the ministry of labor and welfare, ministry of public health, ministry of education, ministry of defense, and ministry of university affairs.

Ministry of labor and welfare, by department of skill development provides vocational training services for people including disables. The aim of this agency is to promote vocational knowledge and capability of people with free of charge. In Thailand, there are provide such services in 8 regions of the country, the institution of skill development, the East in Chon Buri province, the Upper-West in Suphan Buri province, the Upper-North in Lampang province, the West in Ratchaburi province, the Upper-South in Surat Thani province, the North-East in Nakhon Ratchasima province, the Lower-North in Nakhon Sawan province, and the Central in Bangkok. These institutes provide services as to train new skills enable individuals with disabilities to create and develop their job such as electronic repairing, carpenter, mechanic, metal worker, ect (Vimolkanjana, 1998). They also make the arrangement that enable individuals return to the work force by seeking working position in labor market and provide them with capital for independent occupation. Moreover, five hundred bath is given monthly to those who are poor, have severe disability, and unable to help themselves. Provincial Public Welfare Offices locate in every province in Thailand. Their responsibilities are providing counseling for those who have life difficulties, as well as assisting them to have life protection, and accessing to supports, and rehabilitation, according to the Rehabilitation Act.

Ministry of public health offers medical and rehabilitation services for individuals with disability to increase their self-care capability. Some hospitals provide wheelchair, crutches, and other medical supplies to enhance their possibility to live independently.

Ministry of education and ministry of university affairs provide educational services both formal and informal education for all individuals with disability who stay in an institution of public welfare, the disabled vocational development center, and those who request informal education.

Ministry of defense provides vocational training, physical and mental rehabilitation services for disabled people who admitted in Phra Mongot hospital and the War Veterans Organization of Thailand.

Private sectors in Thailand become aware of disabled people assistance. Support and rehabilitation organizations for disabled people were established to help them in various aspects of life such as raising fund for occupation, education, and personal care. These organizations include the social worker council of Thailand in loyal patronage, Saijai Thai foundation in loyal patronage, and disabled people assistance foundation.

Now, there are many laws for disabled persons included the Rehabilitation of Disabled Person Act of B.E.2534, the Insurance Act of B.E.2533, and The Compensation Act of B.E.2537. In practice, Thailand has made rapid progress in working with disabilities following the principle and the Act from 10 years ago. The production for disabled person includes medical rehabilitation, special training for personelle who work with disabled persons, public convenience, education (The National Education Act of B.E.2542 mandates a basic education right-12 years unpaid), employment, vocational training and the sport for disabled persons such as FESPIC games. In this year, the World Committee on Disability has announced that Thailand received the first Franklin Delano Roosevelt International Disability Award (FDR) of 2001. The important reason which promoted Thailand receiving the first award is Thailand has used the Rehabilitation Act of 1991, the Thai disabled person right vows of 1998, and the Thai constitution Act of 1993 which mandates the rights of Thai disabled persons (Samkoset, 2001).

The increasing number of disabled people in Thailand makes available assistance become limit. Therefore, the services are not appropriate, not adequate, and not in time. For instances, most of the persons with paraplegia who live in rural areas might have environment barriers, limited service availability, and inconvenience of public transit. Not being able to independently travel to a desired destination is a major loss. Infrastructure such as public buildings, transportation and all facilities are not available, because of a lack of budget and supporting resources. These situations make some of the Thai paraplegic people have a community re-entry problem (Antaseeda, 1998).

In the aspect of occupational situation, there is high competition whatever the occupation. A constrained economic issue may contribute to selfish people and more take advantage of each other (Ketudat, 1992). Although a disabled person has a high education and capacity, the work opportunity for them still is extremely difficult. They could not compete the current labor markets. Therefore, disabled persons have to accept dependence on family throughout their life ("Thai society with disabled law", 1987).

In spite of major changes in policy and program for disabled persons, at the micro level some disabled persons still face inaccessible supportive resources, loss of work opportunity, and stereotypes from the ingrained values of Thai society about disability.

Young Adult Thai Males with Paraplegia

Regarding this study, the young adult period encompasses the ages of 18 to 35 years (Edelman & Mandle, 1998), or 20 to 39 years (Gugino et al., 1997), a time that ranges from the end of adolescence to the beginning of middle adulthood. Edelman and Mandle (1998) stated that young adulthood is generally the healthiest time of life. Physical growth is complete by the age of 20. Peak physical skills stimulate young adults to be venturesome, daring, enterprising, and aggressive. Therefore this group of people has a high risk of accidents, particularly traffic accidents and falling from heights. These accidents lead to cause spinal cord injury (SCI). Paraplegia and quadriplegia are two major physical conditions which result from SCI. Young adult Thai males with paraplegia were chosen for this study.

Functional Change after Paraplegia

Paraplegia is one disability that is caused by fracture or dislocation of vertebrae due to an accident which usually occurs suddenly. The vertebrae fracture most frequently involved in SCI are twelfth thoracic (T12), and the first lumbar vertebrae (L1). These vertebrae are the most susceptible because there is a greater range of mobility in the vertebral column in these areas (Brunner & Suddarth, 1984). Traumatic injury to the mid and upper thoracic spine can disrupt the upper motor neuron (UMN) pathway within the spinal cord, whereas trauma to the lower lumbar spine can interrupt the lower motor neuron (LMN) pathway. Both level of injuries can disturb autonomic nervous function (Waters, Yakura, Adkins, & Sie, 1992). Severe vertebra injury to the spinal cord can result in total or partial transaction of the cord.

With a complete lesion, no sensation or motor function exists below the level of the lesion, whereas an incomplete lesion may permit some sensation or motor function below the level of the lesion (Borgman & Gainner, 1996). The major physical dysfunctions after SCI are the loss of mobility, and bladder and bowel dysfunction.

The loss of mobility. The loss of voluntary function of lower limbs often comes first for persons with paraplegia. Traumatic injury to UMN lesion causes spastic paralysis of lower limbs, and an LMN lesion results in a flaccid paralysis of lower limbs (McCorMick, 1986). Paraplegics cannot walk or have a decreased ability to walk. Most of them have to use a wheelchair in everyday life. The impairment of mobility and being in a wheelchair have a significant impact upon the developmental tasks and expectations of young adults, the establishment of close personal relationships and the development of a satisfying career (Bozzacco, 1993).These physical limitations create accessibility problems and stress (Pilsecker, 1990).

Waters et al.(1992) found that between 6 to 12 months after SCI, 29 percent of persons with paraplegia (142 persons) with an initial neurological level of injury at or below T12 regained sufficient hip flexor and knee extensor strength to reciprocally ambulate using conventional orthoses and a walker. But walker ambulating in paraplegia requires high energy expenditure. Therefore, most paraplegic persons prefer a wheelchair, which requires less energy expenditure. The author also stated that recovery in a traumatic complete paraplegia is quite limited. The majority (96%) of paraplegics who were complete on admission remain complete at their first and second annual follow-up, only 18% regain lower extremity motor function and this was negligible. Also, Yarkony, Roth, Heinemann, Lovell, and Wu (1988) reported that in complete paraplegia, transfer skills can be achieved and maintained at a high level even when independent walking is not feasible. In general, almost all paraplegics can not walk themselves from place to place, but they can perform transfers independently, and can achieve sufficient mobility with a wheelchair. Such thing allow them to fulfill their vocational, psychosocial and recreational which foster them to have an independent living, community participation and enable them to return to a healthy and active lifestyle (Yarkony, Roth, Meyer, Lovell, & Heinemann, 1990; Zejdlik, 1992).

Bladder dysfunction. Persons with paraplegia experience both neurogenic bladder and neurogenic sphincters that affect urinary storage and emptying capabilities. Basically, neurogenic bladder goes through three stages. It is atonic at first, causing a complete retention of urine without the person experiencing any discomfort or a sensation of needing to void. In the second stage, for those with a lower motor neuron lesion (SCI below T12), the bladder continues atonic, and the person is unable to void because the reflex voiding center was destroyed, but for those who have an upper motor neuron lesion (SCI above T12), the bladder develops hypotonicity, manifested by retention with overflow, and the person involuntarily voids small amounts frequently. Later, the bladder becomes hypertonic and frequent reflex voiding develops (Zejdlik, 1992).

Intermittent catheterization and sufficient fluid intake is the most effective bladder management. It reduces the incidence of urinary tract infection and predisposes to an early recovery of bladder function (McCorMick, 1986). After upper body strength, balance and transfer technique are settled, a person with paraplegia is able to perform self-catheterization. Self-catheterization is an appropriate method of bladder care for men with paraplegia. It is probably the most difficult technique to learn but most persons with paraplegia are able to accomplish this. It promotes independence and improves personal hygiene. Self-catheterization is convenient, especially when planning activities outside the home. Many men with paraplegia can ultimately become catheter-free. However, even though adequate spontaneous voiding can be achieved, the inability to predict or control urinary flow may necessitate an external catheter drainage device or condom, to protect against incontinence (Zejdlik , 1992). In general, self-catheterization is a preferable management in paraplegics. The daily frequency of catheterization diminished as reflex voiding improves. Most of them require the use of condom due to reflex voiding which occurs after each of self-catheterization.

Bowel dysfunction. More than one-third of the survey subjects with SCI rate bowel and bladder dysfunction as having the most significant effect on their lives after injury , and many rank neurogenic bowel dysfunction as one of their major life-limiting problems (Stiens, Bergman, & Formal, 1997). Neurogenic bowel is a term that relates colon dysfunction (such as constipation, incontinence, and discoordination of defecation) to lack of nervous control. It's caused by spastic paralysis or flaccid paralysis. Since the bowel musculature has its own nerve centers within the intestinal wall, it is usually not affected greatly by damage to the upper and lower motor neurons,. Therefore, peristalsis is present or can be stimulated despite somatic paralysis (Hirschberg, Lewis, & Vaughan, 1985). Stiens, Bergman, and Goetz (1997) observed that 29% of persons with complete SCI reported bowel-related problems. Symptom frequency increased in subjects who had been SCI for more than 5 years.

Proper design of the bowel program includes consideration of diet, physical activity, equipment, oral medication, rectal medications, and scheduling of bowel care. Formal, Cawley, and Stiens (1997) reported that bowel program can be utilized to maintain proper stool consistency, promote colonic motility, and trigger defecation. Adequate intake of fluid and fiber contributes to proper stool consistency. Oral agent, bisacodyle, senna, and other substances can be used to promote colonic motility. Bowel scheduling after a meal, at the same time, every 1 to 3 days, thereby takes advantage of the gastrocolic reflex. Emptying generally is accomplished by digital stimulation or via a suppository in person with preserved reflex function in the rectum (Yarkony & Chen, 1996).

However, some persons with paraplegia may be particularly concerned about having bowel accidents in public and the embarrassment that it can cause. Another concern of people with paraplegia is being able to complete a bowel program within a reasonable length of time (Stiens et al., 1997). Kirshblum, Gulati, O'Connor, and Voorman (1998) reported that it is possible to regain bowel control through an appropriate bowel program, and also state that bowel dysfunction in paraplegia need not be associated with complication when managed effectively. An effective bowel program allows persons with paraplegia to continue social, vocational, and sexual goals, as well as the ability to maintain an activity level, functional independence, and social interactions in everyday life.

In conclusion, paraplegia is one disability that is caused by SCI. This injury occurs suddenly and precipitates change in nearly every aspect of life. Depending on the level of injury, an individual with paraplegia may experience major physical dysfunction including loss of mobility and sensation below the level of injury, and lack of bowel and bladder control. These losses of function affect developmental tasks and expectations of young adults, as well as the ability to maintain an independent activity level and social interaction in everyday life. In the midst of striving to achieve physical independence, young adults with paraplegia acquire some greater control over their lives to return to live normally. This has been cast in terms of exploring "coping strategies" and style in adaptation.

Issues of Coping with Paraplegia

People who are permanently and severely impaired as a result of paraplegia, experience a particularly disruptive transformation in the way they perceive their bodies and engage in everyday activities. Throughout a lifetime each paraplegic person is confronted with a variety of stressors which may threaten their psychological and physical well-being, but whose effects can be modified by the response adopted toward them. Paraplegic persons attempt to manage the best as they can. How does a person try to cope with their circumstances? Coping theory addresses this issue.

The Phenomenon of Coping

The coping literature has developed largely within the tradition of psychology and psychiatry. As a result, it emphasizes the individual and their cognitive and emotional process. However, coping rarely takes place in a social vacuum; most stressful events of daily living are involved. Coping theory is applied to understand the adjustment of a person with SCI.

Two discrete approaches to understanding the phenomenon of coping-transactional and ego psychology-are reflected in literature. Lazarus and Folkman (1984), the foremost proponents of the currently dominant transactional approach, situate coping in a cognitive framework that emphasizes the importance of factors external to the individual (e.g., support network). A transactional perspective views coping as a conscious process that is concerned with what a person "actually thinks or does in a specific context" (Lazarus & Folkman, 1984, p. 178). Problem and emotional-focused efforts are directed at situations appraised as stressful. Problem-focused strategies involve attempts to solve or ward off problems, whereas emotion-focused strategies aim to decrease negative emotions. This perspective accords little significance to the role of disposition or personality.

The ego psychology perspective focuses on how an individual's internal psychological processes govern attempts to cope through the use of defense mechanisms. Psychologically rooted, the ego psychology perspective is developmental in nature, with growth being synonymous with the emergence of a more integrated, more desirable, more mature state of being (Reeves, Merriam, & Courtenay, 1999). None of a priori determination is made as to the direction that coping efforts must take, a developmental perspective of coping clearly regards some efforts as more adaptive than others. This perspective is also distinguished from the transactional approach in that it deems factors external to the individual to be of nominal value (Reeves et al., 1999). Defenses are relatively unconscious adaptive mechanisms that are a major means of managing instinct and affect. The use of defense mechanisms signals an individual's attempt to maintain ego integrity under stressful situations.

Although the transactional approach to coping has been the dominant perspective since the 1970s, the coping literature in recent years reflects a renewed interest in the ego psychology perspective (Parker & Endler, 1996). Many theorists attribute this trend to the growing belief that any one theory or approach is incapable of explaining a phenomenon as complex as coping.

Definitions and Related Terms of Coping

There are varied clinical and research traditions on coping, therefore the review of literature regarding definitions of coping is needed.

Gardland and Bush (1982, p 6) defined coping as the process by which an individual attempts to alleviate, attenuate, or remove stress or threat. This process may consist of a rather large array of covert and overt behaviors. In other words, coping is what people do when they have a problem. Focusing specifically on psychological adjustment, Felton, Revenson, and Hinrichsen (1984) defined coping as presumably elicit when the individual cognitively appraises a situation as posing threat, harm, loss or challenge. Individual appropriately selected coping strategies to buffer the individual under stress from emotional distress and maladjustment. In mental health nursing literature, Perko and Kreigh (1988) viewed coping as an ability to adapt and adjust to changing life situations using various strategies, either consciously or unconsciously. Coping is also a process by which an individual attempts to solve problems when confronted with an environmental demand.

Bronstein, Popovich, and Stewart-Amidei (1991) studied coping as it relates to promoting stroke recovery. They defined coping as the way in which humans react and respond to the environment. Coping consists of psychosocial processes aimed at establishing a balance in the person-environment interaction. This definition is similar to Miller's view (1992), who studied coping in chronic illness. The author viewed coping as dealing with situations that present a threat to the individual so as to resolve uncomfortable feelings such as anxiety, fear, grief, and guilt. That is, coping as the specific strategies a sick person selects to deal with the illness and its consequences.

The popular usage of coping definition was defined by Lazarus (1991, p 110). They defined coping as constantly changing cognitive and behavioral efforts to manage specific external and/or exceeding the resources of the person. That is coping is the effort to manage psychological stress. All of these definitions highlight the process-oriented nature of coping.

Coping is a term sometimes used synonymously with adaptation or adjustment (Gage, 1992). Sherman (1991) distinguished between the two concepts by pointing out that adaptation is the master concept, whereas coping refers to adaptation under relatively difficult conditions. Coping is viewed as the link between stress and adaptation. Coping is what one does, the effort one initiates to deal with stressful encounters with the expectation of adaptation as the end result. Livneh and Antonak (1997) described psychosocial adaptation to disability as an evolving, dynamic, general process through which the individual gradually approaches an optimal state of person-environment congruence manifested by: 1) active participation in social, vocational, and avocational pursuits; 2) successful negotiation of the physical environment; and 3) awareness of remaining strengths and assets as well as existing functional limitations.

Adjustment, on the other hand, will refer more specifically to a particular phase (ie, set of experiences and reactions) of the psychosocial adaptation process (Livneh & Antonak, 1997). Garland and Bush (1982) defined adjustment as a goodness of fit between the characteristics of the person and the properties of the environment. As such, adjustment may be the unfolding process of adaptation to crisis situations including the onset of chronic illness and disability. It is alternatively expressed by terms such as: 1) reaching and maintaining psychosocial equilibrium; 2) achieving a state of reintegration; 3) positively striving to reach life goals; 4) demonstrating positive self-esteem, self-concept, self-regard; and 5) experiencing positive attitudes toward oneself, others, and disability (Livneh & Antonak, 1997).

Mastery and resiliency are some of the others terms that emerge in coping literature (Garland & Bush, 1982). To prevent confusion with coping, it is necessary to review these terms. Mastery is one aspect of adaptation achieved as the result of successful coping efforts. Mastery includes learning to deal comfortably, and perhaps routinely, with some element of the environment (Garland & Bush, 1982). Resilience is an active psycho-physiological push to restore a satisfying state of being as the individual shifts from disturbance to comfort. The individual must have the physiological capacity for self-healing (Garland & Bush, 1982), or the individual gets through the event without lasting psychic trauma and manifests resilience (successful coping) (Miller, 1992).

Factors Affecting Coping in Everyday Life

In the discussion of the process of coping with SCI, Gignac and Cott (1998) suggested the variables that have a direct impact on an individual with SCI's activities in daily life which include different domains of disability, the physical and social/political environment, the role of subjective perception, personal resource, and attitude. As well, Gage et al. (1997), who studied understanding the transition to community living after discharge from an acute hospital among disability and chronic physical illness, reported that environment constraints and opportunities, resources, and perceived self-efficacy relate to how they manage to cope at home.

Thus, factors that affect management in everyday life among Thai men with paraplegia may be a secondary condition of injury, psychosocial factors and physical environment.

Secondary conditions of injury. While more people are surviving the initial SCI, their loss of sensation and motor function impairment below injury level causes them face with medical circumstances which are secondary to the injury itself, such as spasticity, pain, pressure sores, urinary tract infection, and autonomic dysreflexia. These secondary conditions of injury have the potential to affect the person's ability to perform and compensate with respect to basic activities of daily living.

Spasticity. Spasticity is a common complication after traumatic SCI It is commonly defined as a state of exaggerated muscle tone with increased tendon reflexes (Zejdlik, 1992). Incidence of spasticity was higher among upper thoracic (T1-T6) than lower thoracic (T7-T12) and lumbosacral level of injury. It may also be related to the length of time after injury, with a greater likelihood of spasticity developing over an increasing time after injury (Maynard, Karunas, & Waring, 1990). The increase in spasticity is associated with cutaneous stimulation, a distended bladder or impacted bowels. Moderate spasticity can be helpful in doing transfer and maintaining muscle bulk, improving lower limb circulation, and possibly retarding osteoporosis. However, excessive spasticity may throw a person out of a bed or wheelchair and interfere with self-care activities, and impair ambulatory in people with incomplete paraplegia (Middleton, Siddall, Walker, Molloy, & Rutkowski, 1996). It can contribute to contraction, pain and the development of pressure sores (Halstead & Carter, 1985).

In general, spasticity has no treatment. It is often necessary to treat spasticity when it interferes with balance, mobility or functional independence, causes concern regarding safety (Middleton et al., 1996), interferes with sleep, is associated with pain, and particularly, interferes with or prevents performance of activities in everyday life (Little, Michlesin, Umlauf, & Britell, 1989). Many different medications are prescribed for the treatment of spasticity. As well, selective nerve blocks can be use to control spastic (Middleton et al.,1996)

Pain. Pain is simultaneously a physiological and a psychological experience. It is reported frequently after SCI. Reports of prevalence vary from 3% to 94%, because of the different types of pain considered and the difficulty of quantifying pain (Stiens et al., 1997). Classification schemes provide at least 3 categories of SCI pain: 1) mechanical pain that is usually localized to the site of the injury; 2) radical pain associated with peripheral nerve injury and often radiating dermal pattern; and 3) dysesthetic pain, usually described as a diffused sensation of burning, stinging or stabbing below the level of lesion. Dysesthetic pain is the most common type of pain complaint (Cairns, Adkins, & Scott, 1996). The latter kind of pain can be affected by the weather, anxiety, depression, stress, smoking, and many other nonspecific variables (Ozer, Britell, & Phillips, 1987).

Pain incidence increased linearly with the time since the injury for persons with paraplegia and found no relation between the level and completeness of injury and pain (Fenollosa et al., 1993). The author also stated that greater pain intensity has been found to be associated with high intelligence, more education, an active role in the injury and spasticity. People who suffer chronic pain following SCI are likely to experience more psychological distress and poorer employment compared with those without pain. Most importantly, pain has been found to be associated with interference in daily activities. Thus, it imposes additional handicap for a given degree of disability (Cairns et al., 1996).

The goal of pain management is moderation and reduction of suffering, rather than complete elimination of pain. Generally, good stretching, avoidance of skin ulcers, good nutrition, and optimal bladder and bowel care are the first steps in treatment (Ozer et al., 1987). Narcotic analgesics are usually avoided because of concerns about a lack of long term effectiveness, addiction, sedating effects, and visceral effects (Stiens, et al., 1997). When pain is causing significant suffering, psychological care, possibly including relaxation training, and psychotherapy are very helpful (Ozer et al., 1987).

Pressure sores. The persons with paraplegia are especially at risk for developing pressure sores. Because of the lack of sensory warning mechanisms, the inability to move freely, and circulatory changes, major threats are posed to the integumentary system (Zejdlik, 1992). Pressure sores are caused by prolonged pressure exceeding capillary pressure and compounded by shearing forces and localized trauma (Halstead & Carter, 1985), at the weight-bearing prominence area such as the sacrum, coccygeal area, and ischial tuberosities especially in persons with paraplegia who sit for long periods (Brunner & Suddarth, 1984). Furthermore, several secondary factors which can significantly contribute to potential pressure sores include: decreased level of awareness as with prescribed medications or substance abuse; nutritional deficits such as dehydration, anemia, and weight management difficulty; musculoskeletal problems, primarily spasm leading to positioning difficulties; cardiovascular problems, dependent edema, particularly of the lower extremities; infection; incontinence; psychological factors and lack of activity (Zejdlik, 1992). The process of pressure sores occurring is fast and insidious. Pressure sores can affect body image, family and social relationships, sexuality and ability to function on the job or to care for oneself in everyday life (Ozer et al., 1987).

The best management of pressure sores is prevention. The principle of management of pressure sores includes relief of pressure, stimulating the circulation, keeping the skin clean and in a healthy condition, and adequate nutrition (Brunner & Suddarth, 1984). If more severe pressure sores develop, such as a wound infection that has invaded the bone, one may need to go back to a long hospital stay for surgery (Ozer et al., 1987).

Urinary tract infection (UTI). Since bladder dysfunction after SCI may result in incomplete bladder emptying, this may necessitate intermitent catheterization for bladder training and may predispose to the development of UTIs (Liguori, Cardenas, & Ullrich, 1997). UTIs had developed in 75% of persons with SCI (Lundqvist, Siostecn, Blomstrand, Lind, & Sullivan, 1991). Trauma related to catheterization was the main

main problem with intermittent catheterization responsible for a high rate of orchiepididymis (Gallien et al., 1998). Signs and symptoms suggestive of UTIs include fever, onset of urine incontinence, increase of spasticity, autonomic dysreflexia, increase of sweating, cloudy and odorous urine, and malaise, lethargy, or a sense of unease (Cardenas, Mayo, & King, 1996).

Maynard and Glass (1987) found that men with SCI have a higher risk of UTIs and renal complication for post-injury, than women, with the male-female ratio at 4.4:1. Therefore, UTIs are a common source of mortality and morbidity (Cardenas et al., 1996). In the case of asymptomatic bacteriuria is generally not treated to avoid the development of resistant organisms, however, symptomatic bacteriuria may be treated with antibiotics and retain the catheter for adequate urinary drainage. Thus, UTIs affect normal management of bladder among paraplegics in everyday life. As Liguori et al. (1997) found, UTIs were negatively associated with functioning and productivity in everyday life.

Autonomic dysreflexia (AD). AD is one threat of life complication after paraplegia. It is frequently precipitated by an overdistended bladder or urinary complications. Sometimes fecal impacting, sexual activity, pressure sores, or perhaps an in-grown toenail will also precipitate it (Zejdlik, 1992). It is manifested by paroxysmal hypertension, pounding headaches, flushed face, sweating above the lesion, nausia, and bradycardia (McCorMick, 1986). Symptoms can quickly progress to dangerous or even fatal levels, thereby creating a medical emergency. A person with high paraplegia is more prone to developing AD initiated in the first year after injury, a danger which persists throughout life. This condition occurs when the injury is sustained at the T4-T6 level or higher. To minimize the risk of AD, persons with high paraplegia should be aware of these factors associated with it (Zejdlik, 1992).

AD is a emergency situation that requires immediate treatment. The treatment includes the paraplegic's head should be raised to promote a reduction in blood pressure. The offending stimulus should be removed at once though the trigger mechanism is not always apparent. A fast-acting antihypertensive medication may need to be given (Zejdlik, 1992).

In conclusion, the most common secondary conditions of injury are spasticity, pain, pressure sores, UTI, and AD, which is able to occur at any time. Long term living with paraplegia brings many unexpected setbacks and uncertainty of complication, which interferes with the personal and social life and the ability to cope with their situation. Therefore, throughout all of their lifetime they will have to face with difficulties.

Psychosocial factors. Paraplegia is not "just" a physical disability. It can profoundly affect a deep psychosocial significance to the persons (Axelson, 1987). They are frequently expressed as depression, self-blame, self-hatred, blocked motivation and repressed activity (Brillhart & Johnson, 1997). When paraplegia has had a significant impact and the associated losses are continuous, the effectiveness of coping with paraplegia is affected by psychosocial factors which include: personal resources, family environment, social network, and socio-cultural attitude (Sherman, 1991; Swanson, Cronin-Stubbs, & Sheldon, 1989; Dewar & Lee, 2000; Matze, Livneh, & Turpin, 2000).

Personal resources. Personal resources include the psychological, social, interpersonal, and material attributes of the individual involved in the coping encounter (Sherman, 1991). Personal resources most frequently studied by sociologists are locus of control (Thoits, 1995), hardiness (Swanson et al., 1989), and hope (Brillhart & Johnson, 1997). These resources are psychosocial factors that have a major impact on coping in everyday life of a paraplegic.

Locus of control (LOC) has much in common with a sense of control or mastery over life (Turner & Noh, 1988). It may account for individual attitude and belief which are important factors in managing paraplegia (Trieschmann, 1986; Frank & Elloitt, 1989). Those with an internal locus of control believe that their behavior is hard work and their well-being can be controlled by their own actions , whereas those with an external locus of control believe their well-being is controlled by fate or powerful others (Swanson et al., 1989). For example, persons with paraplegia who believe internal locus of control were more interested in gaining knowledge of their disability because the internal saw such knowledge as useful in controlling their lives, they had a better self-concept and spent more time for working on activities at home, in educational activities, and time outside the home, and spent more time in a combination of education, paid employment ,and community work (Trieschmann, 1986).

Research has also demonstrated that LOC may be related to effective coping and the individual's coping behaviors. Ferrington (1986) described LOC variables in his own study of the coping effectiveness of hospitalized spinal cord injured persons ($n = 104$). Control includes: a). individual preference for control; b). generalized expectation of control (LOC); and c). perception of control options. Although high levels of perceived control were associated with low levels of depression for both internally oriented ($r = -.59$; $p<.01$) and externally oriented ($r = -.48$; $p<.05$) high preference subjects, the author found no correlation with depression in the low preference group. Subjects who did not value control were not depressed when their perceptions of control were low, regardless of expectation. The researcher concluded that the effects of LOC are contingent upon the individual's perception of the situation. Control orientation also may relate to personality characteristics. Martz, Livneh, and Turpin (2000) summarized research which indicated that individuals with more internal LOC scores had an overall better degree of direct coping and a lower degree of suppression during stressful situations than individuals with a more external LOC. Individuals with an internal LOC were more likely to take step to change aversive life situations than individuals with an external LOC. Finally, they stated that in individuals with SCI, external perceptions of control, maladaptive coping styles, and lower self-esteem are intimately associated.

Hardiness is a personality characteristic associated with resistance to the negative effect of stressors (Swanson et al., 1989), and related to cope with chronic illness (Dewar & Lee, 2000). Hardy individuals: a) believe they can control events; b). are committed to the activities of their lives; and c). perceive change as a challenge to further their development (Swanson et al., 1989).

Research suggests that hardiness enhances psychosocial adaptation, but is not related to physiological adaptation (Swanson et al., 1989). The authors described that hardy disabled persons may experience less psychological distress than those who are not hardy. Inner strength, identified by Bach and McDaniel's (1993) study of SCI, is an aspect of life that is important to an individual's quality of life. According to these authors, inner strength reflects an individual's control over their life and ability to make the best of circumstances.

Hope is described as a powerful human response that positively influences adaptive coping during times of suffering, failure, boredom, loneliness and uncertainty (Herth, 1992). Hope is posited as a "key" or prerequisite to effective coping with the demands and the challenges of chronic illness. Hope is conceptualized as both global (general hope) and time specific (particularized) with multiple dimensions (cognitive-temporal, affective-behavioral, affiliative-contextual) (Herth, 1992). Hope functions as a foundation for dealing with life and guides one's actions. Strong hope gives strength and courage to press forward in handling difficult situations. Weak hope can lead to passivity and resignation (Rustoen, 1995). Lazarus and Folkman (1984) noted that hope is one of the coping resources.

Regarding SCI, there are two studies reported on the relationship between hope and coping. Pizza et al. (1991) studied the relationship between hope, social support and self-esteem in 83 patients with SCI in an inpatients rehabilitation unit and out patient clinic in a regional SCI center. The Miller Hope Scale (MHS), Rosenbery Self-esteem Scale (RSES), and Personal Resource Questionnaire (PRQ) were used in the study. Ages of subjects ranged from 18-73 (M = 34.8) years and levels of injury ranged from C3-L4. The results showed that higher levels of hope were found in subjects with higher levels of self-esteem and social support than in subjects with lower levels of self-esteem and social support. The researchers noted that persons with higher levels of hope had more positive feelings about themselves and were better able to manage with stressful events.

Gage et al. (1997) found the need to be internally resourceful in order to find new ways to do things that used to be easy. They also stated that success come only through their personal determination to succeed. For example, the hope of a person with paraplegia is an essential positive phenomenon necessary for healthy coping. Hope can assist individuals to avoid despair, bypass ongoing unpleasantness or stressful situations , and make life bearable and more meaningful which can serve to strengthen physiological and psychological defenses.

Family environment. A family environment is one of psychosocial factor which has been a powerful predictor of independent functional living outcome variables (DeJong, Branch, & Corcoran, 1984). A supportive family can mitigate the stress of life-threatening disability in many ways, providing emotional support and assistance in daily living. Strong support from the family can help prevent a sense of hopelessness that may increase biological vulnerability and shorten survival time (Doka, 1993). A person with a solid social/emotional support system in the family will has trust that they will get through the traumatic event and go on with life. They will learn to accept that this injury has occurred and that the circumstances cannot be reversed (Gill, 1999). However, support attempts that fail reveal conditions under which received support can be non-beneficial, and at worst, harmful. Family members may push too hard or too soon for recovery, or may become so protective and overly helpful that the person comes to resent their implied dependency (Thoits, 1995). Alternatively, limited support from the family or a fragmented family system are characteristics that lead to poor coping (Gill, 1999).

There are two research-related family environments and adaptations in SCI. McGowan and Roth (1987) studied family functioning and functional independence in SCI adjustment in 41 non-institutionalized post-traumatic SCI families. The functional ability of the SCI subject was assessed by the Functional Life Scale (FLS) and used the Family Assessment Device for assessment of family function. Findings demonstrated that persons with SCI who perceived their family environment as affectionately responsive, open in communication, and clear in delineation of responsibility, had greater self-initiation in home activities, increased social involvement, and a higher overall level of independence. Nurturing feedback from the family can be crucial to preserving the disabled member is self-esteem and self-worth by reinforcing their value as a member of a family system. Furthermore, free and direct exchange of feelings and attitudes among family members may be essential to achieving the long-term role adjustments necessary for the reintegration of a disabled member into the family system. In this way the family may serve as an emotion "buffer" for the individual who must negotiate the severe physical and psychological adaptations associated with permanent paraplegia.

Rintala, Young, Spencer, and Bates (1996) conducted a personal history study to investigate family relationships and adaptation to SCI. One informant was a 30 years old who sustained an incomplete T12 and admitted the first 3 months of his initial comprehensive inpatient rehabilitation. The finding showed three of them from the man's relationship with his family members: reverse support, support from family members, and reciprocal support. The issue of reciprocal support was important. For example, he used the money he loaned his brother before the injury to negotiate with his brother for child care during the last month of rehabilitation. The sense of having contributed money, goods, or services to family members prior to injury allowed him to be comfortable with accepting support from them during this period of crisis in his life. The authors concluded that the relationship with family members is very complex, and the impact of these relationships on the adaptation to an event such as SCI is extremely difficult to assess with certainty.

Social network. The social network is psychosocial factor which play a vital role in helping a person to adapt, adjust, and cope with SCI. Since most individuals with SCI are unable to continue their friendships following their injury. Some able-bodied individuals are extremely uncomfortable with disabled people and for a multitude of reasons are unable to tolerate their presence. Those friends are lost when activities and recreational pursuits are no longer mutually shared (Woodbury & Redd, 1987). One way of compensating for the lack of such socialization experiences is to join disability-related groups that offer ready-made peer group relatives to disability (Zejdlik, 1992). The term "peer group", "self-help group", and support group" are often used interchangeably (Hammell, 1995). Networking with individuals surrounded by similar circumstances and becoming involved in a self-help group. A support group can also be an invaluable resource (Gill, 1999).

The goals of the social network are information gathering, emotional support modeling, goal setting, insight, growth and self-esteem raising. The purpose of the social network is to provide emotional support for members in a safe environment, and to provide a forum for the discussion of feelings and the interchange of ideas and information that will help its members cope with disability (Hammell, 1995). Social network characteristics are voluntary ties, loose structure, more manageable or escapable demands than those that are limited and the same specific problem and that have pre-planned highly structured formats (Hammell, 1995; Thoits, 1995). Social networks offer a number of benefits to members in learning to develop coping strategies such as acquiring a sense of control over life, combating isolation and alienation, developing information networks (Resource for Rehabilitation, 1997), and honest feedback (Zejdlik, 1992). Some networks are more task-oriented, some educationally focused, and some have emotional support as their only goal. However, social networks designed for persons with disability usually have emotional support as their primary goal (Hammell, 1995).

A number of researches are related to social networks and coping with SCI. Evans and Haler (1985) studied a cognitive therapy to achieve personal goals and results of telephone group counseling with disabled adults. The results showed that 63 disabled persons who were given access to a "disability network" through a telephone conference system reported less loneliness than disabled persons who did not participate in the network ($F = 10.59$; $p<.01$).

Anson, Stanwyck, and Krause (1993) investigated social support and health status in 125 persons with SCI. In a mail survey, subjects responded to questions on the SCI quality of life Index (QOLI), and the Reciprocal Social Support Scale. The results showed that the perception of SCI individuals was that they support, as well as are supported by, members of their social networks and the community in general, which is related both to health and to adjustment. The authors suggest that a patient's ability to perceive themselves not only as a recipient, but also as a source of support to family and friends and to the community in general may also contribute significantly to health and adjustment.

In addition, Heinemann (1995) reported that persons perceiving greater support from family and friends had greater disability acceptance and lower levels of psychological distress. Friends' support positively correlated with coping efforts that involved plan problem solving and seeking social support. Woodbury and Redd (1987) concluded that an individual's social network plays an extremely important part in the overall adaptation to living with a SCI.

Socio-cultural attitude. Culture and social attitude is psychosocial factor affect nearly all aspects of persons with disability (Saravanan, Manigandan, Macaden, Tharion, & Bhattacharji, 2001). Every culture values its own image of physical vitality and attractiveness. Therefore, persons with disability may be seen as having a stigmatized trait and may respond to him as a member of the stigmatized category rather than as an individual (Porter & Beuf, 1991). Stigmatizing is a process in which a social meaning is attached to the behavior and characteristics of a person, which places the person outside (Joachim & Acorn, 2000). For example, non-disabled people exhibit social strain when they encounter wheelchair users, which results in short interaction times and excessive physical distance (Stiens et al., 1997), or people always show curiosity, pity, unwanted help, ridicule, exclusion and expectations about how they should behave (Westbrook, 1997). Non-disabled people feel uncomfortable in the presence of someone with disability due to its stigma (Barnes, Mercer, & Shakespeare, 1999). In eastern culture, the metaphorical meaning of being "crippled" includes uselessness, pitifulness, and dependency (Chan, Lee, & Lieh-Mak, 2000). Disabled people are viewed as useless because they are deemed unable to contribute to the "economic good of the community" (Barnes et al., 1999). This is a culture stereotyping of disabled persons (Wendell, 1996).

Stigma, stereotypes, and cultural meanings are all related and interactive in the cultural construction of disability (Wendell, 1996). Disabled people are encountered with prejudice which expresses itself in discrimination and oppression (Barnes et al., 1999). Oppression and discrimination are intertwined. Oppression is a state of being in which an individual is deprived of some human right or dignity and is not given an equal opportunity to compete for available positions (Pillari & Newsome, 1998). That is, disabled people may anticipate or experience discriminatory interaction with non-disabled people.

The outcome of these negative societal attitudes toward disability can cause effects that undermine a person's sense of physical attractiveness, thereby impairing body image. Change in body image caused by disability can affect other aspects of identity and self-esteem (Doka, 1993). Friedland and McColl (1992) noted that individual with disability have seen themselves negatively from statement evidence in which the individuals characterize themselves as worthless or culpable. Generally, it is summarized as self-recriminations of various sorts and affects social interaction, social networking, employment opportunities, self-esteem and depression. As the individuals with paraplegia perceive themselves as different, and this is repeatedly confirmed by other's reactions to them, they had to cope by learning a variety of social skills in order to combat the devaluation and rejection they will experience from others (Trieschmann, 1982). Goffman (1963) describes a variety of reactions to stigma. The author concentrates heavily on coping reactions, or what people do in their concrete efforts to deal with these negative attributions.

Blake (1995) studied the social isolation of young men with quadriplegia. Results showed that the intensity of stigma depends on the type of people with SCI encountered, the period of the person's life cycle, the type of social situation, the person's sense of himself as worthy or demeaned, and his skills in managing other people's definition of the disability.

Haney and Robin (1984) conducted a quasi-study of modifying attitudes toward disabled persons while resocializing SCI patients. The informants included 5 women college students from a physical therapy class, 27 of whom volunteered to take part in the treatment group, and 18 paraplegics and quadriplegics from the SCI unit of the Veterans Administration Medical Center. The procedure composed of a comparison group and a treatment group. The treatment group has experience involving reading a handout sheet on the physiological aspects of SCI and the subsequent introduction to, and social activity with a SCI patient. The comparison group was exposed to information alone. The results of the study was measured by the Attitude Toward the Disabled Person scale (ATDP), Comfort Level scale (CLS), Satisfaction Measurement form (SMF), and Patients Post-Measurement (PPM). Results showed that the contact-plus-information experience, arranged between the students and patients, produced a significant improvement in attitude and the experience was also found to constitute effective resocialization for the SCI patients. The authors concluded the establishment and maintenance of social relationships are of paramount importance in promoting the successful adjustment of SCI patient.

Physical environment. The first physical environment which affected paraplegic people when return home is a total lack of structure to their live (Woodbury & Redd, 1987). Thai house styles are not designed for people who rely on wheelchair. Many steps in the house prevents a passage of a wheelchair. Major obstacles can be the small bedroom and bathroom and are not on the ground floor level of the house. Activities trained from the hospital seem to be harder to do at home. Not being able to get in and out of their house easily, unable the disables interact fully with the rest of the world as regularly and in a meaningful way.

Once paraplegic people can move around the home and get in and out of the house, the problem of transportation and inaccess to public building must then be faced (Barn et al., 1999). Outside the home, participation in public activities such as visiting the doctor, going to a restaurant, using a public toilet, or visiting a friends' house may all be made difficult to impossible because of architectural barriers (Dovey & Graffam, 1987). The architectural barriers include steps, no ramp, heavy doors, high counters and narrow doors and toilets (Barnes et al., 1999).

There are structural barriers out on the streets as well. The existence of curbing and rough pavement presented difficulties for persons with SCI to use a wheelchair (Dovey & Graffam, 1987). Gething (1997) stated that the distance from supportive resources also creates problems in gaining access to some information assistance and working. Dejong et al. (1984) stated that the transportation barrier has the highest negative correlation with productivity (i.e. activities of a constructive nature) in people with SCI. Transport is a further constraint for those dependent on a specialized system (Barnes et al., 1999). Although disabled legislation has been passed in Thailand requiring new buildings to be accessible, people with disabilities still cannot gain access to all the places they would like to go. Additionally, toilets may not be specially designed for disabled people. Physical limitations and accessibility problems create stress at times and affect adjustment in daily life. Dovey and Graffam (1987) stated that one is restricted by practical and physical barriers in both work and social spheres. Social isolation itself almost precludes the chance of successful integration by excluding the individual from situations which might present opportunities.

In a study of people following SCI, Hammell (1992) proposed that for a person with SCI the factors such as negotiating community barriers (architectural and interpersonal), accessing community resources, and use of community transportation help to promote successful transition into the community and resumption of one's societal role. The author commented that lack of access prohibited their full participation in society.

Tarrico et al. (1992) studied the social and vocational outcome of 122 SCI patients. The personal and occupational situation was investigated by interview with a fixed-format standardized questionnaire. Results showed the patient's autonomy appeared to be threatened by architectural barriers in and about the house, approximately one-third (34%) of those classified as "independent" on the standardized rehabilitation scale used, needed some help in their everyday life. A negative occupational outcome emerged that 44% were off, 49% were virtually unemployed, and 7% had an improvement take place. The authors stressed the need for integrating results based on the use of standardized rehabilitation scales with the analysis of potential barriers in the community influencing a patient's ability to exploit their autonomy.

Gage et al. (1997) conducted a qualitative study to explore understanding the transition to community living after discharge from an acute hospital. Data were gathered through group and telephone interviews with a volunteer sample of 27 disabled persons. Results emerged into two stages: in-hospital experience and transition to living in the community. Informants described their experiences of transition in terms that were analytically categorized as: perceived self efficacy, resources, dimensions of occupation, and environmental constraints and opportunities. The authors reported that the accessibility of the desired environment is one of the influencing factors on a successful or unsuccessful transition to the community.

In conclusion, the persons with SCI are challenged to cope with a wide range of stressors in maintaining meaningful lives. Physical environment is one important factor which may promote or reduce effective coping with reintegration in to their community.

Theoretical Perspectives and Research Exploring Coping

In the study of coping in SCI, various theoretical perspectives were reviewed (Lazarus & Folkman, 1984; Zejdlik, 1992; Trieschmann, 1986; Golden, 1984; Martz, et al., 2000), yet few theories have been tested. However, it is found that some theories which have useful concepts may be applied in various research. Historically, the researcher can learn the coping efforts of persons who have sustained SCI by observing directly the development of psychological theories which have precluded on the individual's perception. At present the work of coping in the SCI has changed to rely on the notion of response to injury. It is recognized that response to SCI is mediated by cognitive process (Frank, Elliott, Corcoran, & Wonderlich, 1987). There are a number of cognitive theories which include: Stress and Coping Model (Lazarus & Folkman, 1984), Cognitive Adaptation Model (Taylor, 1983), and Acceptance of Loss Theory (Kearny & Glueckauf, 1999). Most of these theoretical models were used for quantitative framework research especially the Roy Adaptation Model (Roy & Andrews, 1999) and a social theory of disability (Barnes et al., 1999).

Stress and Coping Theory. Several researches have used the cognitive-phenomenological perspective of Lazarus and Folkman (1984) to describe the experiences of coping in SCI persons. Stress and coping theory allows us to view adverse life events as experiences that tax adaptive resources, threaten well-being, and place individuals at risk for stress-related dysfunction and psychopathology (Heineman, 1995). Folkman et al. (1991) described three important features of coping. First, it is process-oriented. Coping refers to what the person actually thinks or does and changes in these thoughts and actions as a situation unfolds. Second, it is contextual. It refers to what the person actually thinks or does within a specific context. Thus, coping is not determined solely by personal dispositions but by the person's appraisal of the demands of a particular situation. Third, coping is defined without reference to its outcome. It refers to efforts to manage, not the success of these efforts. To equate coping with successful outcomes implies that all effective coping results in mastery. However, people are often confronted with situations or conditions that are recurrent or that cannot be mastered. In such case, effective coping involves coming to terms with undesirable outcomes rather than mastering them.

Lazarus and Folkman (1984) described coping as a process that involves three staged cognitive processes: primary appraisal, secondary appraisal, and reappraisal. With primary appraisal, the individual determines whether the condition or stimuli are a threat, and the secondary appraisal includes a review of choices of action if a threat is perceived. In the process of reappraisal the original situation is reviewed in light of the results of initial coping efforts and any new or additional information, and a decision is made to continue or discontinue the current coping efforts or initiate new coping behavior (Miller, 1992; Sherman, 1991).

Individual differences in appraisal arise from learned behavior patterns, values systems, and personality dispositions (Lavery & Clarke, 1996). Two types of coping have been described as those that are directed toward the environment, and those that are directed toward the self. Therefore, coping has two major functions; to manage or alter the problem that is causing distress, referred to as problem-focused coping, or to regulate emotional responses to the problem, referred to as emotion-focused coping. If a harmful situation is perceived as being uncontrollable with few possibilities for beneficial change, emotion-focused strategies help to maintain hope and optimism. On the other hand, if the situation is perceived as controllable, problem-focused strategies are more likely to be adapted. The nature of the situation has a major impact on the effectiveness of different strategies, with those that are beneficial in one situation often being ineffective in another. Furthermore, coping strategies may change over time, whereby those coping strategies that are adopted early in the adjustment period become less successful as time progress, and then alternative coping strategies are adopted (Lazarus & Folkman, 1984; Folkman et al, 1991; Lavery & Clarke, 1996).

Furthermore, the Stress and Coping Model was advanced by Pearlin and Schooler (1987). They posited a two-facet model. The first facet, the focus of coping, was seen to be composed of three elements: 1) appraisal focusing (eg, logical analysis, cognitive redefinition, avoidance, denial); 2) problem focusing (eg. seeking information and support, taking action, identifying alternative reward); and 3) emotion focusing (eg. effective regulation, emotional discharge, resign acceptance).

The second facet, the method of coping, was seen to be composed of three elements: active-cognitive, active-behavioral, and avoidance.

In addition to this conceptual model of coping with stress, many specific coping strategies have been proposed or can be identified in the literature. Much of this research uses empirically derived scales that posit the operation of coping modes such as: 1) avoidance or escapism; 2) problem solving or instrumental action; 3) denial or minimization; 4) seeking social support; 5) seeking meaning; 6) blaming or criticizing oneself; 7) planning; 8) acceptance of a situation; 9) turning to religion or wishful thinking; 10) disengaging from a situation; 11) negotiating or bargaining; and 12) ventilating feelings.

Many researchers have emphasized the important role of coping strategies in SCI persons as predictors of adjustment or adaptation to circumstances which have been drastically changed (Hammell, 1992). In addition, coping strategies are viewed as predictors of depression reactions (Heinemann, 1995).

Regarding specific a coping strategies, Buckelew, Frank, Elliot, Chaney, and Hewett (1991) defined three groups of spinal patients (high, medium and low distress) by their scores on the SCI-90-R. Using the WOC, they found the "high distress" group scored higher on wish-fulfilling fantasy, emotional expression, self-blame, and threat minimization subscales. The authors concluded that these strategies may not be effective in managing the psychological distress associated with SCI. There were no specific coping styles related to the "low distress" group.

Wheeler et al. (1996) assessed personal styles and ways of coping in 45 wheelchair users, the persons with SCI, brain injury, and multiple sclerosis. Three groups of subjects were formed, differentiated by etiology for their disability. All of them completed the Personal Styles Inventory and the Way of Coping Inventory. Results suggested that subjects with brain injury possessed the most limited coping resources. Subjects with multiple sclerosis were highest of the three groups in a frequency of utilization of emotional coping, and they also revealed a fundamentally introverted and stability-based personality style. Subjects with SCI utilized a predominantly problem-solving means of coping; and they revealed a basic personality style characterized as extroverted and stable. In the three groups of subjects, there were no differences in emotional or problem solving coping styles ($p < 0.05$ both).

Elliott, Godshall, Herrich, Witty, and Spruell (1991) studied the effects of problem-solving appraisal on psychological adjustment in 90 spinal cord injury persons. The subjects ranged from 20 to 27 years of age. The Problem-Solving Inventory (PSI) measured three aspects of self-appraised problem-solving ability (Problem-solving confidence, approach-avoidance, and personal control). It was predicted that self-appraised effective problem-solvers would demonstrate less depressive behavior and psychosocial impairment and would be more assertive than self-appraised ineffective problem-solvers, regardless of the time since the onset of injury. Results indicated that problem-solving appraisal was significantly predictive of all three dependent measures, confirming the hypotheses ($PSC = .84$, $PC = .76$, $APPRO = .91$, $p < .001$).

Cognitive Adaptation Theory. In an alternative model of coping, Taylor (1983) described the ways in which individuals adjust to threatening events. The author suggested that coping with threatening events consists of three processes:

1) a search for meaning; 2) a search for mastery; and 3) a process of self-enhancement. These three processes are central to developing and maintaining illusions and that these illusions constitute a process of cognitive adaptation. This model describes the individual as self-regulator and as motivated to maintain the status quo.

Searching for meaning involves identifying why the event happened in one's life and assessing what impact the event has on one's life. A search for meaning can be understood in terms of a search for causality and an attempt to understand the implications (Taylor, 1983).

Searching for mastery over the event and one's life, the safety and the predictability of life are reconstructed. What needs to be done in order to prevent the future occurrence of this or other possible disasters is identified and attempted through action or alteration of one's personal belief system (Taylor, 1983).

Following SCI, some individuals may suffer a reduction in their self-esteem. The theory of cognitive adaptation suggests following a process where individuals attempt to build their self-esteem through a process of self-enhancement (Taylor, 1983). Individuals face these three themes simultaneously and successful resolution depends on the ability to develop and maintain a set of illusions (Woodbury & Redd, 1987). Taylor (1983) argued that these illusions are a necessary and essential component of cognitive adaptation and that reality orientation may actually be detrimental to adjustment. The author also argued that the need for illusions is sufficient to enable individuals to shift the goal and foci of their illusions so that the illusions can be maintained and adjustment allowed to persist.

This concept is contrary to the traditional idea that positive mental health is based on being in touch with reality and not hiding behind illusion. However, illusion or the alteration of one's belief system is likely to serve a very beneficial protective role in the lives of SCI persons (Woodbury & Redd, 1987). No empirical research has been found concerning this theory.

Acceptance of Loss Theory. Keany and Glueckauf (1999) applied the basic tenets of the acceptance of loss theory, which was proposed by Wright (1983), particularly the four value changes, to the acceptance of disability. The authors emphasized the common perception of disability as a misfortune or value loss. Acceptance of disability is an adjustment of a person's value system such that their actual or perceived losses from disability do not negatively affect the value of existing abilities (Keany & Glueckauf, 1999).

Wright (1983) proposed four major changes in a person's value system that preclude or limit devaluation. A) Enlargement of the scope of value. The enlargement of scope is initiated when the person begins to recognize the importance of values presumed lost. Such recognition is stimulated by a variety of experiences, including the need to manage the activities of daily living and the need to seek relief from being satiated with grief. When a person can find meaning in events, abilities, and goals, then the person is enlarging their scope of values. B) Subordination of physique relative to other values. As the scope of values broadens, the relative emphasis on physique decreases; the "worth" of the person begins to be determined by abilities and characteristics in addition to those related to physique. For example, personality and effort may gain in importance relative to appearance or actual ability. C) Containment of disability effects. Friedman and DiMatteo (1989) described people who view disabled persons as incapable of engaging in any kind of constructive behavior, even though that is not true. This phenomenon is called "identity spread". Identity spread results in unwarranted implications of a disability in many facets of life. Containing disability effects, therefore, represents an important value change, because not all areas of life are disability-connected, and those may be affected in ways not commonly presumed (Wright, 1983). Containment of spread is dependent on the perceiver. For example, spread can be avoided or decreased if the disability is seen as a "possession" rather than a personal characteristic, that is, a person with a disability rather than a disabled person (Keany & Glueckauf, 1999). d) Transformation of comparative status values to asset values. When a personal quality or ability is compared to a standard, a comparative-status value has been given to it. In contrast, asset (intrinsic) values involve evaluation based on qualities inherent in the thing being evaluated, such as its intrinsic worth, and usefulness. With an asset value, it is possible to focus on the quality of the object, ability, or person being evaluated rather than on its status compared to something or someone else.

Elliott (1999) used the Acceptance of Disability scale (AD) combined with the Inventory to Diagnose Depression (IDD), the Social Problem Solving Inventory – Revised (SPSI-R), and the Career Factors Inventory (CFI) as an instrument in studying the relation of social problem solving abilities to the psychological and physical adjustment of persons with recent SCI. The samples were composed of 80 who incurred quadriplegia, 94 had sustained paraplegia, and 12 individuals had injuries to the lower regions of the spine, resulting in cauda equina injuries. informants were an average of 31.83 years of age. The result showed that impulsive and careless problem-solving skills were associated with less acceptance of disability { $B = -.29$, $t(177) = -3.32$, $p < .01$}, whereas better rational problem-solving skills were significantly associated with a greater acceptance of disability { $B = -.15$, $t(177) = 2.39$, $p < .05$). Lower acceptance of disability and lower scores on the rational and avoidance problem-solving scales were associated with more career decisional needs. Lower level of education was associated with more career informational needs. Greater negative problem orientation predicted each self-report outcome variable.

Roy Adaptation Model. In the Roy Adaptation Model, the individual strives to respond to a constantly changing internal and external environment through adaptation. Adaptation is both a process and an end state (Roy & Andrews, 1999). As an adaptive system, the individual's response to stimuli elicits coping mechanisms leading to either adaptive response (positive behaviors) or ineffective response (negative behaviors) (Thornbury & King, 1992). Three types of stimuli in the internal and external environment affect the person's ability to adapt. Focal stimuli are those that immediately confront the individual and are the most critical in initiating behavior. Contextual stimuli are all additional stimuli that contribute to behavior and provide meaning to the situation for the individual. Residual stimuli include the values and beliefs that affect how the individual responds in a given situation. An individual's ability to adapt is determined by the effect of all three types of stimuli (Roy &Andrews, 1999).

Roy described the person as an adaptive system. The person has an internal process, a coping process, that acts to maintain the integrity of the person (Roy & Andrews, 1999). Roy conceptualized coping processes as "the complex controls within the person". Coping processes are defined as innate or acquired ways of interacting with the changing environment. Innate coping processes are genetically determined or common to the species and are generally viewed as automatic processes. Acquired coping processes are developed through strategies such as learning. The experiences encountered throughout life contribute to customary responses to particular stimuli (Roy & Andrews, 1999). The Roy model further categorizes these innate and acquired coping processes into two major subsystems, the regulator subsystem and the cognator. The regulator subsystem responds automatically to stimuli through neural, chemical, and endocrine coping channels. The cognator subsystem responds through four cognitive-emotive channels of the perceptual, information processing, learning, judgment, and emotion. Perceptual and information processing includes the activities of selective attention, coding, and memory. Learning involves imitation, reinforcement, and insight, whereas the judgment process encompasses such activities as problem-solving and decision-making. Through the person's emotions, defenses are used to seek relief from anxiety and to make effective appraisal and attachments (Roy & Andrews, 1999).

A person's regulator and cognator subsystems function in four modes to meet their needs. These adaptive modes are a) the physiological mode, b) the self-concept mode, c) the role function mode, and d) the interdependence mode. These four modes of adaptation also serve as modes of observable behavior.

One study using the Roy Adaptive Model was found concerning Spinal cord injury. Gless (1995) demonstrated the application of the Roy adaptation model to the care of clients with quadriplegia. The author conducted one case study to demonstrate the effectiveness of using the nursing process within the model's guidelines to promote adaptation in a client with quadriplegia. Each of the four adaptive modes was assessed by using the six steps of the nursing process. These steps include: a) assessment of behavior, b) assessment of stimuli c), nursing diagnosis, d) goal setting, e) intervention, and f) evaluation. The evaluation study found that application of the Roy model to the case study was successful in helping the nurse integrate the physical, psychological, and social aspects of the patient care. The author concluded that using the nursing process within the model's framework can help the nurse effectively plan and implement care for clients who have an adaptation problem.

Social Theory of Disability. During the 1970s and 1980s, disabled activists and their organizations voiced increasing criticism of the individual medical model of disability which later became known as a social approach to disability (Barnes et al., 1999). The social model approach concentrates on obstacles imposed on disabled people who limit their opportunities to participate in society. Hence, measures of disability should provide a way of monitoring the effects of physical, social and economic disability barriers experienced by disabled people (Barnes et al., 1999).

In advancing a critique of the personal tragedy model, the disabled people's movement has generated a social model of disability (Barnes et al., 1999; Oliver, Zarb, Silvert, Moore, & Salisbury, 1988). This model focuses on the experience of disability. It considers a wide range of social and material factors and conditions such as family circumstances, income and financial support, education, employment, housing, transportation and building environment, and others. The study of disability focuses on the experience of disability at the micro-level, with particular reference to the attitudes and feelings of an individual with an impairment. It is important to generate an account of how their self-identity links with everyday routine and behavior. These daily events are the process of social adjustment which arise both from the interactions between the individual and his physical and social environment and, more importantly, from the meanings that these interactions have for both the individual and their family (Oliver et al., 1988; Hammell, 1995). The interaction of many factors and variables will make it impossible to identify a course of adjustment that is predictable, solitary and uniform (Trieschmann, 1988).

With social theory of disability, coping and adaptation is studied in the broad context of the social environment of each individual. Successful outcome is felt to relate not only to the physical and psychological attributes of the person but also to his unique physical and social environment (Hammell, 1995).

A number of qualitative research studies were found related to coping in SCI persons. There is only one qualitative study concerning lived experiences of paraplegic patients in a Thai cultural context (Chuenklin et al., 2000).

Ray and West (1984) conducted an interview study of coping with spinal cord injury. In this study, 22 male and female paraplegics, whose range of age was between 20 and 40 years old, were interviewed about their problems and coping in three domains: social relationship; sexual performance and relationship; and personal adjustment. The researchers reported that people used a number of strategies for dealing with other people and their attitudes, and for readjusting sexually. In dealing with their own personal feelings about their disability, the ways of coping were varied and included suppression, denial and repression, resignation and acceptance, positive thinking, independence and assertiveness. The researcher noted that no specific recommendations can be made about ways of coping because these will depend on the individual and their circumstances.

Brillhart and Johnson (1997) conducted a qualitative study to describe motivation and the coping process of 9 men and 3 women who sustained both paraplegia and quadriplegia. All informants had completed an SCI program at a rehabilitation program at a rehabilitation hospital. An analysis of the interviews revealed five motivational categories: independence, education, socialization, self-esteem, and realization. This study is very useful in gaining insight into the motivation of adults who have coped with disabilities effectively and can help rehabilitation nurses determine how they can promote the motivation that clients need to achieve a quality lifestyle.

Dewar and Lee (2000) conducted a grounded theory study to examine how individuals with catastrophic illness and injury managed their personal and social world. The 5 out of 28 males and females were disabled from SCI. All informants had endured their chronic conditions from 3 to 25 years prior to the study. The finding showed three phases in the process of bearing illness and injury. Phase 1 was finding out (the individual seeks their diagnosis or prognosis). Phase 2 was facing reality (the individual understands that they had limited choices and their condition would deteriorate). Phase 3 was managing reality (the individual makes an effort to continue on with life even though the informants' circumstances were radically different than before). These phases flowed together and were re-experienced continuously. The individual employed three strategies: protecting, modifying, and boosting. Strategies used involved facing deterioration, as they were still able to expand their abilities to manage, and consequently, limit their suffering. The authors noted that the ongoing nature of their problems not only shaped the strategies that they were able to use but also had an impact on their interactions with other individuals.

Evidence from a phenomenological study of 10 Thai adults with complete paraplegia, Chuenklin et al. (2000) described lived experiences of being paraplegia patients. The finding revealed that the lived experiences of being paraplegic patients gave meaning to paraplegia in three periods: the early period, where it was related to symptoms, namely numbness with an inability to move, but able to be cured; the transitional period, where it was interpreted as a curable disease and a disability in one's life; and the living with paraplegia period, where it was interpreted as being a normal person by having a physical disability only with a functional heart and brain. The patients also described their feelings in the three periods of being paraplegic: the early period, had feelings of doubt and anxiety; the transitional period, showed a rejection of being unable to walk and acceptance of being a paraplegia; and the living with paraplegia period, which portrayed normal feelings, maintaining self worth, having transient body image disturbance, feeling anxiety and hoping to be able to walk again.

Patients described their experience which was conceptualized into important themes as follows: the early period, living as lying only and under the supervision of a caregiver; the transitional period, several themes emerged including hoping to seek alternative treatment, confronting with complication and unpleasant symptoms, learning how to live, provision of facilities for living, being independent to decrease the family burden, and being isolated from the society; and the living with paraplegia period, stop seeking alternative treatment, be able to take care of themselves, return to be part of the society and contributing benevolence to oneself. Caring needs identified by the paraplegic patients were: 1) supporting the expense of living, 2) requiring love and compassion, 3) providing a physical setting of independent living, 4) having information regarding illness and living well, and 5) hoping for a recovery by miracle.

The findings provided a better understanding of the lived experiences of being paraplegic patients. It will be useful for improving holistic nursing care, responding to patients' needs within the context of the southern Thai society and culture, and enhancing the quality of life of paraplegic patients.

In a review of coping theoretical perspectives, coping framework was equated as a successful adjustment which contrasts, and the inability to achieve successful adjustment was regarded as a reflection of a "succumbing" framework. The coping framework was predicted upon the following characteristics: 1) emphasizing what the person can do; 2) assuming an active role in shaping one's life; 3) recognizing personal accomplishments; 4) successfully managing negative life experiences; 5) reducing limitations through changes in the physical and social environments; 6) participating in and enjoying value activities; and 7) having the ability to minimize actual or perceived losses that stem from a disabling condition and ability to retain the value of existing abilities (Livneh & Antonak, 1997; Keany & Glueckauf, 1993). The coping behaviors manifested by persons with physical disabilities which were indicative of successful psychosocial functioning were: 1) keeping distress within manageable limits; 2) maintaining a sense of personal worth; 3) restoring relationships with significant others; 4) increasing opportunities for recovery of physical functioning; and 4) increasing the likelihood of achieving personally valued and socially acceptable life goals (Livneh & Antonak, 1997).

Summary

The reviewed literature proposed an environmental background of young adult Thai males with paraplegia such as the structure of family, religion and the characteristics of men and the physical condition of people with paraplegia. Moreover, such factors as a secondary condition of injury, psychosocial factors and the physical environment may also be affected in coping with paraplegia.

Literature and empirical findings in Western countries indicate physical impairment from SCI is a disability impact on all aspects of an individual's life. They have to confront with a totally new experience of their body as relates to the physical, psychological, and social environment. They acquire some greater control over their lives and returned to some sort of normality. Coping with SCI had previously been explored in terms of the Stress and Coping Theory, Cognitive Adaptation Model, Roy adaptation Model, Acceptance of Loss Theory, and Social Theory of Disability.

The Stress and Coping Theory is a socio-psychological perspective. This model viewed disability as a course of stress in two major respects. Firstly, undesirable changes resulting from a disability may be interpreted as stressful life events. Secondly, the results from a disability relate to alterations in functional status which require constant and on-going readjustment and then are interpreted as chronic strains. This model emphasized coping as process and contextual oriented and without reference to its outcome. This model involves cognitive process in managing or altering the problem that is cause of stress, referred to as problem-focused coping, or to regulate emotion response to the problem, referred to emotional-focused coping.

The Cognitive Adaptation Model suggests the way in which an individual adjusts to threatening events by developing and maintaining illusions and that these illusions constitute a process of cognitive adaptation. This model describes the individual as self-regulatory and as motivated to maintain the status quo.

The Roy Adaptation Model viewed humans as holistic adaptive systems. People with disability are biopsychosocial beings in constant interaction with a changing environment. People cope with the changing environment by a positive response known as adaptation. Internal or external stimuli affect the behavior of people. People adapt to these stimuli through four adaptation models: physiologic, self-concept, interdependence, and role function.

The Acceptance of Loss Theory believes adjustment to disability requires value changes. Not only will the meaning which the individuals attach to disability need to change or to be modified but they may also need to change their attitudes about what is meaningful in their life.

Finally, the Social Theory of Disability proposes that adjustment to paraplegia is the process of social adjustment which arises both from the interactions between the individual and their physical and social environment, and more importantly, from the meanings which these interactions have for both the individual and their family. This theory describes the outcome as a complex interactional equation of many factors such as intellectual capacity, philosophical religious belief, family structure, medical complication, income, transportation, interpersonal support and so on. Therefore, the interaction of so many variables will make it impossible to identify a course of adjustment which is predictable, solitary and uniform.

According to previous research study on coping with SCI, the existing data are inconclusive. Past research efforts have explored coping by mixing between coping, adjustment or adaptation to disability, and also studied both genders, a variation of informant age, and mixed disability conditions. The findings from these studies do not clearly depict a perception and coping with paraplegia in young men. Furthermore, a perception and coping perceived by young men are primary influenced by their personal and socio-cultural backgrounds. Therefore, in order to provide culturally sensitive rehabilitation nursing for young Thai men with paraplegia, additional research is necessary that will assist nurses in understanding the perception and coping of young Thai men with paraplegia.